that (1) *Bruce et al.*'s drawings show a wristwatch free of protruding elements and external stems, except for th details of the watch and band construction, (2) that *Freeman et al.* discloses a watch/band structure 10, 12 made of flexible material, battery 14, and pressure sensitive device 18 located below indents, and (3) that it would have been obvious to one of ordinary skill in the art to make the band in *Bruce et al.* flexible and to provide pressure-sensitive devices or a switch for activating the watch as shown in *Freeman et al.* *Neher* is cited as showing a bayonet-type clasp means in a watch band which is snag free and smooth when closed. The *Schickedanz* patent is cited as teaching the use of a flexible and stretchable wristband having watch components.

This rejection is respectfully traversed.

As set forth in independent claim 25, Applicants' invention provides a safety wristwatch system free of protruding elements and external stems. The system includes a battery operated watch for displaying time having an even surface devoid of roughness and projections, a pressure sensitive device operatively connected to the watch for control of the watch, and a band of flexible material meeting the surface of the watch with a flush joint for retaining the watch on a limb of a wearer. The band

has no abrupt changes in width and thickness, and the watch, the pressure sensitive device and the band have even continuous surfaces relative to themselves and to each other to prevent injuries and infection upon contact with persons other than the wearer. In this way Applicants' invention provides a safety wristwatch system that may be worn safely in the presence of the injured, the infirm, infants and the elderly without risk of injuries to persons that the wearer may come in contact with.

The primary reference to *Bruce* fails to disclose or suggest such a wristwatch system or the structure recited in the Applicants' claims. Although the Examiner states that *Bruce et al.* discloses a wristwatch "free of protruding elements and external stems...(and)...band being without abrupt changes...", it is respectfully submitted that *Bruce's* drawings show otherwise.

Figure 1 of *Bruce*, which is the top view of the central portion of the watch, shows an ornamental design wherein the portion of the band housing the display is configured in the form of an elongated "S", and the display itself is in the form of an ellipse, with its long axis essentially normal to the band. Figures 2, 3, and 5 of *Bruce*, which are side views and an end view, show that the central portion of the band which houses the

display is formed in the shape of an arch which supports the watch case consid rably above the wrist of the wearer. This structure is highly unusual, and the arch form is further repeated in the watch crystal or covering which is dome shaped.

In contrast with Applicants' watch system as recited in the claims, the "S" arrangement and elliptical display area of the design as shown in Figure 1 of *Bruce* necessarily results in a wristwatch which is far wider than one of more lineal design, while as shown in Figures 2, 3, and 5 of *Bruce* the placement of the watch case itself in the arch shaped structure above the wrist of the wearer and the added thickness of the dome shaped watch crystal or covering, compared to a crystal of flatter design, results in a wristwatch which at the location of the display suddenly becomes on the order of twice as thick as it would otherwise be without these features. These ornamental arrangements make the watch case and display itself a "protruding element", in a band that has "abrupt changes in width and thickness" which fails to disclose or suggest the wristwatch structure recited in Applicants' claims.

The great bulkiness of *Bruce* increases the likelihood that the wristwatch may come in contact with and harm persons other than the wearer. Bulkiness is unacceptable in Applicants' safety

wristwatch because on many occasions a thick wristwatch worn by a person closely "brushing by" will strike and injure a person while a thinner wristwatch would not. Similarly, a wider band presents a larger potential impact surface more likely to contact others and cause harm. The central portion of *Bruce's* band must also be constructed of semi-rigid material in order to maintain the "S" configuration and the arch structure, and this required stiffness of the band in *Bruce* (in contrast with Applicants' flexible band) would further increase the probability of harm to others.

Moreover, *Bruce's* patent covers only the central portion of the wristwatch, but the rounded ends of the straps, illustrated in broken lines, suggest that the closure itself would be of the buckle type or possibly of Velcro. Means for control are not shown on *Bruce's* drawings, but these items might add, along with the closure, yet another protruding element to the design. Thus, *Bruce's* design is far from snag-free and is not free of protruding elements as recited in Applicants' claims.

The defects and deficiencies of the *Bruce* design are nowhere remedied by any of the secondary references to *Freeman et al., Neher* or *Schickedanz*. As pointed out previously in Applicants' June 11, 2003 Amendment After Final, *Freeman et al.* likewise

shows a device that has numerous protruding elements and projections and abrupt changes in thickness, and contains no hint of a safety wristwatch system "free of protruding elements ... having an even surface devoid of roughness and projections ... a flush joint for retaining said watch on a limb of a wearer...band without changes in width and thickness and having even continuous surfaces relative to themselves and each other..." *Freeman* is a wearable multi-function device with a built-in display which may be capable of displaying video, pedometric and psysiological monitoring, smart card applications, health care information, cellular messaging services, and so on. The device is so large and bulky that the display area must be made flexible to accommodate the normal motions of the wrist, and as shown in Figures 1, 2A, and 2B, *Freeman* uses polymer edging 20 to "add comfort to a wearer" (Col. 3, lines 8-10)-- a further indication that the device is so large and bulky that users would find it uncomfortable to wear if such edging were not provided. In contrast to Applicants' system, the *Freeman* device embodies numerous protruding elements and projections and abrupt changes in thickness, and closures that are potentially dangerous and likely to snag. *Freeman* is far from snag free.

Freeman's use of pressure sensitive devices may provide a practical and convenient means for control of the many computer

based features of the device, and for the inputting required in connection with medical information, credit transactions, and so on. However, there is nothing in *Freeman's* choice of pressure sensitive devices or his overall design to teach or even hint at a safety wristwatch or that benefits will be achieved if combined with the design of *Bruce*.

Moreover, even if *Freeman* and *Bruce* were somehow combined as suggested by the Examiner, the result would still be far from snag-free, because of *Bruce's* protruding elements, abrupt changes in band width and thickness, and bulk resulting from unusual width and thickness.

Although the Examiner states that the *Neher, Global Cellular Position Tracking Device*, discloses a bayonet-type clasp means which is snag-free and smooth when closed as shown in *Neher's* Figures 3 - 5, it is respectfully submitted that the *Neher* device itself is far from snag-free and smooth in its entirety. The *Neher* patent shows a global positioning element in a wrist or ankle worn device, whereby the position of the wearer may be remotely monitored, anytime and anywhere. The device embodies numerous elements prohibited in Applicants' safety wristwatch system. The wristband/tracking unit 18 and the slide switch 56 as shown in Figure 4 of *Neher* are "protruding elements", its band is

made of rigid steel rather than of "flexible material", and the band has abrupt changes in width and thickness at the tracking unit, and square corners, rather than being "without abrupt changes in width and thickness and having even continuous surfaces relative to themselves and each other to prevent injuries and infection upon contact with persons other than the wearer". Thus, not only is the *Neher* device not a wristwatch, the device is far from snag-free and cannot be used as a safety wristwatch system as recited in Applicants' claims.

The main design criteria which led to *Neher's* use of the bayonet clasp included the need for a closure which was cut-resistant, tamper proof, conveniently lockable, and made of material compatible with the steel bracelet, and which could complete an electrical circuit in the bracelet when closed to indicate to a remote monitor whether the bracelet was intact or broken. The bayonet clasp probably best met these requirements. However, there is nothing in the use of the bayonet clasp or purpose or design of the *Neher* device to trigger in the mind of one skilled in the art the idea of applying the clasp to a snag-free wristwatch, whose basic design concept is to avoid causing injuries to persons other than the wearer.

The *Schickedanz* timepiece is described by the Examiner as teaching, " ... the use of a flexible and stretchable wristband...". The *Schickedanz* timepiece, however, as shown in Figures 1 and 2, consists of a bangle on which multiple small rigid panels consisting of liquid crystal display elements or the like are mounted around all or nearly all of the surface and which, when read together, may display time in various ways. The multiple inflexible display units are individually mounted on a flexible annular wristband which *Schickedanz* describes in his claim 4 as a "... closed annular wrist band being a flexible and stretchable annular wrist band."

In contrast, Applicants' claims require a "band of flexible material" which rules out expansion type bracelets of metal and other rigid materials, and *Schickedanz* describes his elastic bracelet as "similar to a conventional elastic metal watch bracelet" (page 3, line 17). Thus, although the *Schickedanz* timepiece may be flexible, a flexible wristwatch is different from and is not necessarily a substitute for a band of flexible material. In contrast to Applicants' claimed system in which the band has "even continuous surfaces relative to themselves," the numbers in the display units of *Schickedanz* may be countersunk in relation to their surfaces (page 3, line 50), and there are multiple interstices between the display units which may scratch

persons other than the wearer. The drawings in *Schickedanz*, moreover, show many sharp edges on the rigid display material, and the timepiece appears to be rigid in the direction of the axis of the wrist of the wearer such that the bangle may cock and cause damage upon contact with a person other than the wearer. Thus, while *Schickedanz* includes a "flexible and stretchable" wrist band, the *Schickedanz* timepiece is far from snag-free and cannot function as a safety wristwatch.

Moreover, the combination of *Schickedanz's* flexible and stretchable wristband with *Bruce* would require the additional step of using this inner band as the main watch band. There is nothing in the flexible and stretchable wristband in *Schickedanz*, where it is used under a wristwatch which is far from snag-free, or in the wristwatch itself, which discloses or suggests a snag free design as recited in Applicants' claims. Thus, it is respectfully submitted that the Examiner is improperly relying on the use of hindsight to make this combination rather than anything that is directly apparent from the teachings of *Schickedanz* and *Bruce*.

Although countless wristwatches are in existence, the safety wristwatch of Applicants' claims has not been previously invented or even hinted at in any of the prior art references cited by the

Examiner or anywhere else. One possible explanation for this lack of appreciation by those skilled in the art may be that their backgrounds and knowledge sets equip and train them to create and improve products that are beneficial to manufacturers, sellers, and users of their products. This traditional approach is to design for the comfort and satisfaction of the wearer of the wristwatch. The safety wristwatch of Applicants' claims, however, is aimed at benefitting an altogether different constituency, namely, persons including those in caring situations and particularly the ill, aged, and infants, who may be struck and injured by a conventional wristwatch. Thus, there is little reason to expect that those historically skilled in the art should or would be designing and thinking in terms of this "outside" constituency or would come up with the new concept of the safety wristwatch recited in Applicants' claims. This circumstance may explain why, among the thousands of wristwatch designs currently offered, Applicants have seen none that are snag-free. Said another way, this possible limitation of the field of view of those skilled in the art toward designing quite exclusively for the wearer, may explain why the safety wristwatch of Applicants' claims has not been invented before, despite its considerable benefits.

As described in Applicants' June 11, 2003 Amendment After

Final, each year more than 2 million persons contract infections as a result of hospital care, and an estimated 10 million patients are at risk in the United States annually for contracting a Staph infection. Staph infections can occur when the integrity of the skin barrier is broken through surgical procedures, scrapes and scratches, or in other ways, and they can cause serious and sometimes fatal illness in the most vulnerable, including newborns, certain diabetics, and the elderly. Applicants' safety wristwatch, if worn by caregivers instead of ordinary wristwatches which frequently have sharp edges and are bulky and likely to injure, would avoid or reduce the possibilities that their wristwatch would strike and injure the persons in their care, and open a path for infection.

The *Bruce* patent, dominated by the "S" shaped band and raised display, illustrates a wristwatch of modern high-style design, while *Freeman* with its large size and shape, suggests the potentialities, beyond simple timekeeping, for wristworn devices. *Schickedanz* has the look of a jewelry-like expansion bracelet, and *Neher* is a surveillance and monitoring device. In some embodiments *Neher* is essentially a high-tech manacle which uses a bayonet type clasp because it is the best method of providing a closure that is, "difficult or even impossible to remove without the proper unlocking mechanism", (page 7, line 32). None of

these four references contain any hint or suggestion of Applicants' safety wristwatch design, or embody concepts likely to lead to it.

Although with hindsight, the combining of the elements required to achieve the safety wristwatch recited in Applicants' claims may be argued to be readily evident using Applicants' teaching as a template to pick and choose elements to arrive at Applicants' invention, it seems extremely unlikely that any or all of the cited references, in the hands of one skilled in the art, would suggest to him or her, the putting together of a safety or snag-free wristwatch as recited in Applicants' claims. Morever, even if the combination were to be made as suggested by the Examiner, one would still not achieve Applicants' invention for at least the reason that the structure of the *Bruce* device itself is a protruding element. In addition, despite the number of references cited by the Examiner, none contain any hint or suggestion of a snag-free design. Therefore, it is respectfully submitted that these references evidence non-obviousness, rather than a probability that these references could or would be combined in the manner suggested by the Examiner.

In view of the foregoing, it is respectfully submitted that the claims be allowed and that the application be passed to issue.

Applicants also respectfully request that the Examiner formally make the *Druce et al* Design Patent No. 394,394 of record as it was not included on the Examiner's PTO-892 Notice of References Cited attached to the August 8, 2003 Office Action.

Respectfully submitted,
FIELD ET AL 1

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I hereby certify that this correspondence is being sent by facsimile-transmission to the Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on October 30, 2003.

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